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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,688	03/11/2005	Francois Paquet	14995NP	7315

293 7590 08/24/2006

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EXAMINER

KERSHTEYN, IGOR

ART UNIT PAPER NUMBER

3745

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,688	<b>Applicant(s)</b> PAQUET ET AL.	
	<b>Examiner</b> Igor Kershteyn	<b>Art Unit</b> 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935.C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/11/2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities: The specification does not contain any section headings.

Appropriate correction is required.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains legal phraseology "said". Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claims 1, 3, 4, 5, and 9 are objected to because of the following informalities:  
Claim 1, in lines 6 and 7, claim 3, in line 4, claim 4, in line 4, claim 5, in line 4, and claim 9 in line 7, recite "a value included between", which should be changed to --a value between-- because the language "included" brings an uncertainty to claimed ranges such as it is not entirely clear whether the claimed value is within the ranges or it is **including** the above claimed ranges. The Examiner interprets the claim language as *the value between*. If Applicant meant to claim the range *the value including between*, the claims will be given an indefiniteness rejections. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al. (3,874,819).

In figures 1-3, 4(a) and 5(a), Tamura et al. teach a Francis runner comprising a crown 15, a band 17 and blades 13 extending between said crown and said band, said blades defining between themselves channels for flow of liquid.

Tamura et al. do not teach the angle between the linear speed of progress of one of said blades and the median line of said blade at the level of its trailing edge, has, in the vicinity of the point of attachment of said blade on said band, a value included between 20 and 25.degree.

The general conditions of claims 1-3, and 6-9 are disclosed by Tamura et al. in column 4, lines 11-33, and the angle between the linear speed of progress of one of said blades and the median line of said blade at the level of its trailing edge, has, in the vicinity of the point of attachment of said blade on said band is recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation, and it is not inventive to discover the optimum

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or workable ranges by routine experimentation. See MPEP 2144.05 Obviousness of ranges.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura et al. (3,874,819) as stated above further in view of Kaplan.

Tamura et al. teaches all the subject matter except they don't teach the angle between said linear speed and said median line has a value included between 70 and 120 degree.

In figures 1 and 2, Kaplan teaches a Francis runner having a crown, a band and a blade, the angle between the linear speed N2 and the median line T has a value included between 70 and 120 degree.

Since Tamura et al. and Kaplan are analogous art because they are from the same field of endeavor, that is the Francis turbine art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have the angle between said linear speed and said median line has a value included between 70 and 120 degree as taught by Kaplan with the runner of Tamura et al. for the purpose of having a turbine runner of an adequate efficiency.

Note. It is noted that having different angles of runner blade on the side of the crown and on the side of the band is well known in the art and is recognized and a result effective variable and the evidence can be found in U.S.4,108,570, JP63-75362, JP58-160560, and JP61101680.

***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of three patents.

Swearingen (3,610,775) is cited to show an effect of blade configuration to an overall efficiency for Francis runner.

Holmes et al. (4,479,757) is cited to show an effect of blade configuration to an overall efficiency for Francis runner.

Bildal et al. (6,135,716) is cited to show an effect of blade configuration to an overall efficiency for Francis runner.

***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

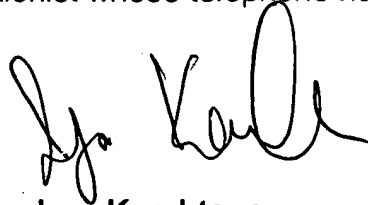
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is 571-273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK

August 15, 2006

A handwritten signature in black ink, appearing to read 'Igor Kershteyn', written in a cursive style.

**Igor Kershteyn**  
**Primary Patent examiner.**  
**Art Unit 3745**

**IGOR KERSHTEYN**  
**PRIMARY EXAMINER**